U.S. Department of Commerce
National Institute of Standards and Technology
Gaithersburg, MD 20899

Certificate Number: 95-090

National Type Evaluation Program

Certificate of Conformance

for Weighing and Measuring Devices

For:

Grain Balance
Digital Electronic
Model: GT Grain Series
n_{max}: See Below
Capacity: See Below
Platform: 6.65 inch diameter

Accuracy Class: II

Submitted by:

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Standard Features and Options

Model	Capacity	n_{max}	d
GT4100G single range	4100 g 144 oz 9 lb 289 lb/bu	41000 28800 18000 28900	0.1 g 0.005 oz 0.0005 lb 0.01 lb/bu
GT4100DG dual range ■	14.460/114 oz 0.9040/9 lb 410/4100 g 28.92/289 lb/bu	28920 18080 41000 28920	0.0005/0.005 oz 0.00005/0.0005 lb 0.01/0.1 g 0.001/0.01 lb/bu

Standard Features:
- Semi-automatic zero
*• Units: g, oz, lb, and lb/bu
*• Percent Weighing (100 x 0.01 %)

Options:
- Printer**

* Some of the standard features are selectable from the menu during the set-up of the device.

** The Statistics Printout and the Good Laboratory Practices (GLP) parameters are printing options and do not affect the metrological performance of the device; thus, these parameters can be accessed in the LFT mode.

■ The GT4100DG meets the criteria needed for use of the dockage mode in GIPSA applications in the general, moisture, and precision categories.

Temperature Range: 10 °C to 30 °C (50 °F to 86 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: July 19, 1995

Gilbert M. Ugiansky, Ph.D.
Chief, Office of Weights and Measures
Issue Date: October 16, 1996

Ohaus Corporation
Grain Balance
Model: GT Grain Series

Application: The devices may be used in general purpose weighing and in the weighing of grain for NIST Handbook 44 applications. The GT4100DG meets the criteria needed for GIPSA applications.

Identification: The identification badge is located on the left side of the balance. Any attempt to remove it will destroy the badge.

Sealing: Access to the jumper switch, that enables external calibrations, is located inside the scale. The device may be sealed through the dust cover and a sealing screw, located under the platter. To verify that the calibration mode has been locked out:

Press and hold the "on/re-zero" key until "MENU" is displayed.
Release the key and "CAL" is displayed.
Momentarily press the "on/re-zero" key again.
If "SPAN" is displayed, the calibration mode has not been disabled.
If "TEST" is displayed, the calibration model is disabled.

The "TEST" function verifies the last calibration procedure by comparing the last mass value to calibrate the balance and the current mass. The "TEST" function is not a method of calibration.

Operation: Test Weight Mode

Calculations for test weights must be based on one quart only. Test weight, in lb/bu, is calculated as follows:

sample weight (in grams) x 0.0705479 = test weight (in lb/bu)

Dockage Mode (Percent Weighing)

With the balance in any unit, place an empty container on the platter and press "on/re-zero."
Fill the container to the desired weight (the sample weight must be > 120 g).
Press and hold the "memory/set" key until "% Set" is displayed.

Test Conditions: The Model GT Grain was evaluated for device design and operation. The scale is essentially identical to the Ohaus Model GT Series (Certificate of Conformance No. 94-079) with modifications to the software and minor changes to the display. Performance tests were conducted on Models GT410 and GT4100 of the GT Series. The test conditions are repeated below for reference.

The emphasis of this evaluation was on the device design, operation, marking, and compliance with influence factors requirements. The balances (GT410 and GT4100) were tested over a temperature range of 10 °C to 30 °C. The devices were also tested for accuracy over a voltage range of 100 VAC to 130 VAC. Model GT410DE, a movable fine range balance, was also evaluated. The results of these test indicate that the Series complies with applicable requirements.

Type Evaluation Criteria Used: NIST Handbook 44, 1995 Edition

Tested By: A. P. Buié (MD)